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10/599,416

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Robertus Hendricus Maria Wubben

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

BOYD, JONATHAN A

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

09/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/599,416 | Applicant(s) WUBBEN ET AL. | |
| | Examiner JONATHAN BOYD | Art Unit 2629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Sekiya et al (2003/0006949) (herein "Sekiya").

In regards to claims 1 and 14, Sekiya teaches a method of driving and a driver

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for a matrix display panel with a pixel comprising a first and a second sub-pixel both having an inertia (*See; p[0048] for sub-pixel's R,G*), to supply a first and a second drive signal to the first and the second sub-pixel, respectively (*See; p[0048] where it is implied that drive signals are sent to each sub pixel individually to control their respective voltages individually*), at a predetermined repetition rate in response to a first and second input signal indicating a first and a second desired brightness transition of the first and second sub-pixel, respectively (*See; p[0048] – p[0049] where an effective brightness is calculated*), the driver comprising: means for detecting whether the first drive signal would have to surpass a maximum level or to fall below a minimum level in order to compensate for the inertia of the first sub-pixel so as to enable the first sub-pixel to substantially complete the first desired brightness transition within a single predetermined period being the reciprocal of the predetermined repetition rate, and means for adapting the first and/or the second drive signals to compensate for the inertia and for increasing or decreasing a level of the second drive signal if it is detected that the first drive signal would have to surpass the maximum level or to fall below the minimum level, respectively (*See; p[0048] – p[0056] and Figs. 5 and 6 where the sub-pixels compensate for each other within one frame period*).

In regards to claim 2 and 11, Sekiya teaches wherein the pixel further comprises a third sub-pixel (*See; p[0048] for sub-pixel B*), the driver being arranged for further receiving a third input signal indicating a third desired brightness transition of the third sub-pixel to supply a third drive signal to the third sub-pixel at the predetermined

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repetition rate, the means for increasing or decreasing the level of the second drive signal comprises a clipping compensator for receiving a first obtainable minimum level of the first drive signal, a first obtainable maximum level of the first drive signal, the second input signal, and the third input signal to supply the second drive signal and the third drive signal wherein at least one of the levels of the second and third drive signal is increased or decreased with respect to the level of the second and third input signal, respectively, if it is detected that the first drive signal would have to surpass the maximum level or to fall below the minimum level (*See; p[0048] – p[0056] and Figs. 5 and 6 where the sub-pixels compensate for each other*).

In regards to claim 3, Sekiya teaches wherein the predetermined period is a frame period (*See; p[0034]*).

In regards to claim 4 and 6, Sekiya teaches further comprising a frame memory for storing the first input signal to supply a previous first input signal of a previous frame (*See; p[0048] for a frame buffer*), the means for detecting whether the first drive signal would have to surpass the maximum level or to fall below the minimum level comprising a first limit value determination circuit for receiving the previous first input signal to determine, starting from a level of the previous first input signal a first obtainable minimum level being obtainable by supplying the minimum level to the first sub-pixel, and a first obtainable maximum level being obtainable by supplying the maximum level to the first sub-pixel (*See; p[0048] for a overdrive voltage calculating section*), and the

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means for increasing or decreasing the level of the second drive signal comprising a clipping compensator for receiving the first obtainable minimum level, the first obtainable maximum level, and the second input signal to supply the second drive signal having a level being increased or decreased with respect to the level of the second input signal, respectively, if it is detected that the first drive signal would have to surpass the maximum level or to fall below the minimum level (*See; p[0048] – p[0056] and Figs. 5 and 6 for sub pixel compensation by increasing or decreasing their respective voltage levels*).

In regards to claim 5 and 7, Sekiya teaches wherein the frame memory is arranged for further storing the second input signal to supply a previous second input signal of the previous frame, and wherein the driver further comprises an overdrive circuit for receiving the second drive signal and the previous second input signal to supply an overdriven second drive signal to the second sub-pixel (*See; p[0049] where the remaining two sub pixels are overdriven based on values from the frame buffer*).

In regards to claim 8, Sekiya teaches wherein the means for increasing or decreasing the level of the second drive signal is arranged for changing the level of the second drive signal to obtain together with a level of the first drive signal a brightness transition of the first and the second sub-pixels together being substantially identical to the desired brightness transition of the first and second sub-pixels together (*See; p[0048] – p[0056] and Figs. 5 and 6 for sub pixel compensation by increasing or*

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decreasing their respective voltage levels).

In regards to claim 9 and 10, Sekiya teaches further comprising a source gamma corrector for receiving the obtainable minimum level and the obtainable maximum level to supply a source gamma corrected minimum level and a source gamma corrected maximum level to the clipping compensator (*See; p[0036] for gamma correction*).

In regards to claim 12 and 13, Sekiya teaches a display panel (*See; Fig. 1 for LCD 2*) and signal processing circuitry (*See; Fig. 1 for a LCD controller*).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Johnson et al (6304254) for an overdriving switching technique.

Gadeyne et al. (2002/0097345) for a video conversion technique.

Wu et al (2005/0225522) for selective overdrive of sub-pixels.

Kobayashi (7345,663) for pixel overdrive of an LCD panel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN BOYD whose telephone number is (571)270-7503. The examiner can normally be reached on Mon - Fri 6:00 - 4:00 EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. B./
Examiner, Art Unit 2629

/Amr Awad/
Supervisory Patent Examiner, Art Unit 2629